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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,894	09/16/2003	Chi-Ming Che	9661-041-999	4526

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EXAMINER

GEMBEH, SHIRLEY V

ART UNIT	PAPER NUMBER
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1614

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/663,894

Applicant(s)

CHE, CHI-MING

Examiner

Shirley V. Gembah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/9/ 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 9-11, 13, 25-28, 30, 31, 33-35, 37, 55, 58 and 59 is/are pending in the application.
- 4a) Of the above claim(s) 14-24, 38-54, 56-57 and 60-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9-11, 13, 25-28, 30, 31, 33-35, 37, 55, 58 and 59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

The response filed **1/24/07** presents remarks and arguments to the office action mailed **11/29/06**. Applicants' request for reconsideration of the rejection of claims in the last office action has been considered.

Applicants' arguments, filed, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Status of claims

Claims 1-4, 6-7, 9-11, 13, 25-28, 30, 31, 33-35, 37, 55, 58 and 59 are pending.

Claims 14-24, 38-54, 56-57 and 60-63 are withdrawn.

Claims 1, 25, 55, and 58 are amended.

Claims 5, 8, 12, 29, 32, and 36 are cancelled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6-7, 9-11, 13, 25-28, 30, 31, 33-35, 37, 55, 58 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite parameters ranging "m" and "p" are cited as ranging from -3 to 5 and -3 to 3, respectively. These ranges are inclusive of both negative and positive parameters values. Considering the claim structure, it is vague and indefinite as to what is meant for these negative and positive values, presumably charge states. These values would result in negatively or positively charged chemical structural presence which conflicts with the R moiety limitations regarding positive charge states wherein none of the components of the chemical structure are cited with a positive charge. It is noted that the first set of R moieties in instant claim 1, for example maybe neutral or negatively charged, but that here are no positive R group moieties cited to give the "m" value a positive value for the chemical structure.

The claims also recite the parameter "n" as "equal to the absolute value of m/p" which is vague and indefinite as leading to an undefined value when "p"=0. Note that dividing by zero mathematically is undefined.

Claims 58 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is inconsistency in the representation of X^P . The structure has X^P but defines it as X^p last line, page 7 of the claims. It is unclear as to what the representation of X^p is. The claim recites the limitation X^p in the instant claim 58. There is insufficient antecedent basis for this limitation in the claim.

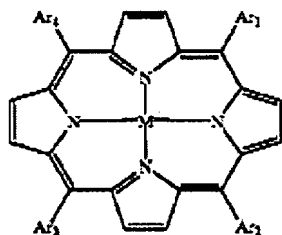
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-4 and 58-59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wheelhouse et al. US 6,087,493.

Instant claim 1 is directed to a method for induction of apoptosis of cancer cells, comprising administering to a patient a metal porphyrin (Wheelhouse et al. see col. 4, lines 35-50), wherein the metal is gold (III) (Wheelhouse et al. see col. 4, lines 50-51)

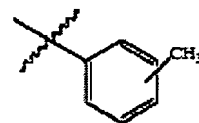


complex

wherein instantly claimed R(1, 4, 7 and 10) are Aryl (1, 4, 7 and 10) (Wheelhouse et al. see col. 4, lines 35-50), R(2, 3, 5, 6, 8, 9, 11, and 12)

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are hydrogen as in instant claims 1-2 and 58-59. Absent factual evidence when a carbon is given no substituents it is a hydrogen taken into account the bonds since carbon can form four bonds) and the counter ion is a pharmaceutical preparation (Wheelhouse et al. see col. 4, lines 54-55). And with regards to the instant claim 3, the reference teaches R(1, 4, 7 and 10) is Aryl. An aryl as referred to is a functional group derived from a simple aromatic ring a phenyl (as defined by cancerweb.ccl.ac.uk enclosed) wherein the aryl is a phenyl (see col. 4, lines 60-65), wherein the phenyl is optionally-4methylphenyl (Wheelhouse et al. see col. 5, lines 10-15). Although the



reference suggests the methyl group in various positions as in it however, teaches from the structure that the methyl group is capable of attaching to any of the positions and one possible position is the para (fourth position) as in claim 4. The (Wheelhouse et al. see abstract) teach these compounds are been used in developing cancer treatments and used in the treatment of cancer (Wheelhouse et al. see col.s 15, line 10-15 and 38, lines 42-55) and are effective telomerase inhibitors and have an effect in modulating tumor proliferation and mortality in animal models (Wheelhouse et al. see col. 2, lines 6-26 and also lines 38-41). Thus teaches apoptosis as claimed in the instant claim 1.

As to instant claims 58-59, wherein a complex is formed between a ligand and a gold(III) complex, Wheelhouse et al. teach a complex is formed (see col. 11, lines 60-

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61) wherein the complex consist of a porphyrin and a metalloporphyrin as in claim 59, thus claim 58 the formation of a complex is obvious.

One of ordinary skill in the art would have been motivated to use the teaching of the above reference Wheelhouse et al. and induce apoptosis to cancer cells as claimed because the references teaches the use of types of metal porphyrins in the treatment of cancer at the time the claimed invention was made. With regards to the formation of complex, one of ordinary skill in the art would have been motivated to use the teaching of Wheelhouse et al. formed a complex as taught and used at the time the instant claim was invented because the reference teaches so. Also, Wheelhouse et al. teach, inhibition of telomerase activity vial G-quaddruxplex structure, via stabilizing or disrupting formation of such G-quadruplexes. G-quadruplexes are polynucleotides (see col. 2, lines 30-41).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shirley V. Gembah whose telephone number is 571-272-8504. The examiner can normally be reached on 8:30 -5:00, Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SVG
5/11/07

Ardin H. Marschel 5/13/07
ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER